SEQUENCE LISTING

<110> Kabushiki Kaisha Hayashibara\Seibutsu Kagaku Kenkyujo

<120> Interleukin-18-binding protein

<140> PCT/JP98/05186

<141> 1998-11-18

<150> JP 247, 588/98

<151> 1998-09-01

<150> JP 327, 914/98

<151> 1998-11-18

<160> 41

<210> 1

<211> 164

<212> PRT

<213> Homo sapiens

<400> 1

Thr Pro Val Ser Gln Thr Thr Ala Ala Thr Ala Sen Val Arg Ser

1

15

Thr Lys Asp Pro Cys Pro Ser Gln Pro Pro Val Phe Pro ¼la Ala Lys

25

55

30

Gln Cys Pro Ala Leu Glu Val Thr Trp Pro Glu Val Glu Val Pro Leu

40

Asn Gly Thr Leu Ser Leu Ser Cys Val Ala Cys Ser Arg Phe Pro Asn

20

60

Phe Ser Ile Leu Tyr Trp Leu Gly Asn Gly Ser Phe Ile Glu His Leu

65

70

75

80

Pro Gly Arg Leu Trp Glu Gly Ser Thr Ser Arg Glu Arg Gly Ser Thr

85

5

90

10

Gly Thr Gln Leu Cys Lys Ala Leu Val Leu Glu Gln Leu Thr Pro Ala

Leu His Ser Thr\Asn Phe Ser Cys Val Leu Val Asp Pro Glu Gln Val Val Gln Arg His Val Val Leu Ala Gln Leu Trp Ala Gly Leu Arg Ala Thr Leu Pro Pro Thr Aln Glu Ala Leu Pro Ser Ser His Ser Ser Pro Gln Gln Gln Gly <210> 2 <211> 165 <212> PRT <213> Mus musculus <400> 2 Thr Ser Ala Pro Gln Thr Thr Ala Thr Val Leu Thr Gly Ser Ser Lys Asp Pro Cys Ser Ser Trp Ser Pro Ala Val Pro Thr Lys Gln Tyr Pro Ala Leu Asp Val Ile Trp Pro Glu Lys Clu Val Pro Leu Asn Gly Thr Leu Thr Leu Ser Cys Thr Ala Cys Ser Arg Phe Pro Tyr Phe Ser Ile Leu Tyr Trp Leu Gly Asn Gly Ser Phe Ile Glu His Leu Pro Gly Arg Leu Lys Glu Gly His Thr Ser Arg Glu His Arg\Asn Thr Ser Thr Trp Leu His Arg Ala Leu Val Leu Glu Glu Leu Ser Pro Thr Leu Arg Ser Thr Asn Phe Ser Cys Leu Phe Val Asp Pro Gly Gln Val Ala Gln Tyr His Ile Ile Leu Ala Gln Leu Trp Asp Gly Leu Lys Thr Ala Pro Ser Pro Ser Gln Glu Thr Leu Ser Ser His Ser Pro Val Ser\Arg Ser Ala Gly Pro Gly Val Ala

```
165
```

```
<210> 3
<211> 22
```

<212> PRT

<213> Homo sapiens

<220>

<221> UNSURE

<222> 6..8

<223 > "Xaa" means an unidentified amino acid.

<220>

<221> UNSURE

<222> 11

<223> "Xaa" means an unidenti\fied amino acid.

<220>

<221> UNSURE

<222> 13

<223> "Xaa" means an unidentified amino acid.

<220>

<221> UNSURE

<222> 16..17

<223> "Xaa" means an unidentified amino acid.

<400> 3

Thr Pro Val Ser Gln Xaa Xaa Xaa Ala Ala Xaa 🗚 la Xaa Val Arg Xaa

1

5

10

15

Xaa Lys Asp Pro Cys Pro

20

<210> 4

<211> 9

<212> PRT

```
<213> Homo sapiens
<400 ♦ 4
Gly Ser Thr Gly Thr Gln Leu Cys Lys
  1
                   5
<210> 5
<211> 11
<212> PRT
<213> Homo \sapiens
<400> 5
Glu Arg Gly Set Thr Gly Thr Gln Leu Cys Lys
  1
                                       10
<210> 6
<211> 8
<212> PRT
<213> Homo sapiens
<400> 6
Leu Trp Glu Gly Ser Thr Set Arg
<210> 7
<211> 15
<212> PRT
<213> Homo sapiens
<220>
<221> UNSURE
<222> 6..8
<223> "Xaa" means an unidentified amino acid.
<220>
<221> UNSURE
```

<212> PRT

```
<223>
       'Xaa" means an unidentified amino acid.
 <220>
 <221> UNSURÆ
 <222> 13
 <223> "Xaa" means an unidentified amino acid.
· <400> 7
 Thr Pro Val Ser 🐧 In Xaa Xaa Xaa Ala Ala Xaa Ala Xaa Val Arg
   1
                                        10
                                                             15
 <210> 8
 <211> 23
 <212> PRT
 <213> Homo sapiens
 <220>
 <221> UNSURE
<222> 14
 <223> "Xaa" means an unidentified amino acid.
 <220>
 <221> UNSURE
 <222> 17..18
 <223> "Xaa" means an unidentified amino acid.
 <400> 8
 His Val Val Leu Ala Gln Leu Trp Ala Gly Leu Arg Ala Xaa Leu Pro
                                                             15
 Xaa Xaa Gln Glu Ala Leu Pro
              20
 <210> 9
 <211> 10
```

```
<213> Nomo sapiens
<220>
<221> UNSURE
<222> 8..9
<223> "Xaa" means an unidentified amino acid.
<400> 9
Ala Leu Val Leu 🗘 u Gln Leu Xaa Xaa Ala
<210> 10
<211> 29
<212> PRT
<213> Homo sapiens
<220>
<221> UNSURE
<222> 13..15
<223> "Xaa" means an unidenti\fied amino acid.
<220>
<221> UNSURE
<222> 17..18
<223> "Xaa" means an unidentified amino acid.
<400> 10
Ala Leu Val Leu Glu Gln Leu Thr Pro Ala Leu His Xaa Xaa Xaa Phe
                                                           15
Xaa Xaa Val Leu Val Asp Pro Glu Gln Val Val Gln Arg
             20
                                  25
<210> 11
<211> 12
<212> PRT
<213> Homo sapiens
```

<212> PRT

```
<22 N> UNSURE
<222>
<223 "Xaa" means an unidentified amino acid.
<220>
<221> UNSURB
<222> 10
<223> "Xaa" means an unidentified amino acid.
<400> 11
Gln Cys Pro Ala Xaa Glu Val Thr Trp Xaa Glu Val
  1
                                       10
<210> 12
<211> 7
<212> PRT
<213> Homo sapiens
<400> 12
Trp Glu Gly Ser Thr Ser Arg
<210> 13
<211> 6
<212> PRT
<213> Homo sapiens
<400> 13
Leu Val Asp Pro Glu Gln
 1
                   5
<210> 14
<211> 7
```

```
<213> Homo sapiens
<400>
Ile Glu\His Leu Pro Gly Arg
  1
                   5
<210> 15
<211> 4
<212> PRT
<213> Homo sapiens
<400> 15
His Val Val Leu
 1
<210> 16
<211> 7
<212> PRT
<213> Homo sapiens
<400> 16
Glu Gln Leu Thr Pro Ala Leu
 1
<210> 17
<211> 8
<212> PRT
<213> Homo sapiens
<400> 17
Ile Glu His Leu Pro Gly Arg Leu
 1
<210> 18
⟨211⟩ 6
<212> PRT
```

<220>

```
<213> Nomo sapiens
<220>
<221> UNSURE
<222> 2
<223> "Xaa" means an unidentified amino acid.
<220>
<221> UNSURE
<222> 5
\langle 223 \rangle "Xaa" means an unidentified amino acid.
<400> 18
Tyr Xaa Leu Gly Xaa Gl
  1
<210> 19
<211> 4
<212> PRT
<213> Homo sapiens
<400> 19
Phe Pro Asn Phe
 l
\langle 210 \rangle 20
<211> 8
<212> PRT
<213> Homo sapiens
<220>
<221> UNSURE
<222> 2
\langle 223 \rangle "Xaa" means an unidentified amino aci\backslash q.
```

```
<221 Y UNSURE
<222>
<223>
     "Xaa" means an unidentified amino acid.
<220>
<221> UNSUR€
<222> 7
<223> "Xaa" means an unidentified amino acid.
<400> 20
Tyr Xaa Leu Gly Xaa Gly Xaa Phe
  1
<210> 21
<211> 7
<212> PRT
<213> Homo sapiens
<220>
<221> UNSURE
<222> 4..5
<223> "Xaa" means an unidentiatied amino acid.
<400> 21
Glu Val Thr Xaa Xaa Glu Val
  1
                   5
<210> 22
<211> 8
<212> PRT
<213> Homo sapiens
<220>
<221> UNSURE
<222> 2
<223> "Xaa" means an unidentified amino acid.
```

```
<220>
<22 \> UNSURE
<222>
<223> 'Waa' means an unidentified amino acid.
<220>
<221> UNSURK
<222> 7
<223> "Xaa" means an unidentified amino acid.
<400> 22
Tyr Xaa Leu Gly Xaa Gly Xaa Phe
  1
<210> 23
<211> 11
<212> PRT
<213> Homo sapiens
<220>
<221> UNSURE
<222> 1..2
<223> "Xaa" means an unidentified amino acid.
<220>
<221> UNSURE
<222> 5..6
<223> "Xaa" means an unidentified amino \acid.
<400> 23
Xaa Xaa Val Ala Xaa Xaa Arg Phe Pro Asn Phe'
  1
                                       10
<210> 24
<211> 8
```

<221> UNSURE

<222> 8

```
<212≯ PRT
<213> Mus musculus
<400> 24
Leu Lys Gl\u Gly His Thr Ser Arg
  1
                   5
<210> 25
<211> 11
<212> PRT
<213> Mus musculus
<220>
<221> UNSURE
<222> 4
<223> "Xaa" means an unidentified amino acid.
<400> 25
Glu His Arg Xaa Thr Ser Thr\Trp Leu His Arg
 1
                   5
                                       10
<210> 26
<211> 10
<212> PRT
<213> Mus musculus
<220>
<221> UNSURE
<222> 4
<223> "Xaa" means an unidentified amino acid.
<220>
```

<223 "Xaa" means an unidentified amino acid.

```
<400 ≥ 26
Glu H\s Arg Xaa Thr Ser Thr Xaa Leu His
                                        10
  1
<210> 27
<211> 13
\langle 212 \rangle PRT
<213> Mus muskulus
<220>
<221> UNSURE
<222> 1..8
<223> "Xaa" means an unidentified amino acid.
<400> 27
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Ala Val Pro Thr Lys
                                        10
<210> 28
<211> 12
<212> PRT
<213> Mus musculus
<400> 28
Ala Leu Val Leu Glu Glu Leu Ser\Pro Thr Leu Arg
                   5
  1
                                        10
<210> 29
<211> 7
<212> PRT
<213> Mus musculus
<400> 29
Ile Glu His Leu Pro Gly Arg
  1
                   5
```

Jul.

```
<211>
<212> PRT
<213> Mus musculus
(220)
<221> UNSURE
<222> 1
<223> "Xaa" means an unidentified amino acid.
<400> 30
Xaa Asp Gly Leu Lys Thr
  1
<210> 31
<211> 4
<212> PRT
<213> Mus musculus
<400> 31
His Ile Ile Leu
  1
<210> 32
<211> 492
<212> DNA
<213> Homo sapiens
<220>
<221> mat peptide
<222> 1..492
<400> 32
aca cct gtc tcg cag acc acc aca gct gcc act gcc tca gtt aga agc
                                                                       48
Thr Pro Val Ser Gln Thr Thr Ala Ala Thr Ala Ser Val Arg Ser
  1
                                      10
                   5
                                                           15
```

. [

aca aag gac ccc tgc ccc tcc cag ccc cca gtg ttc cca gca gct aag Thr Lys Asp Pro Cys Pro Ser Gln Pro Pro Val Phe Pro Ala Ala Lys cag tgt cca gca ttg gaa gtg acc tgg cca gag gtg gaa gtg cca ctg Gln Cys Pro Ala Leu Glu Val Thr Trp Pro Glu Val Glu Val Pro Leu aat gga acg ctg agc tta tcc tgt gtg gcc tgc agc cgc ttc ccc aac Asn Gly Thr Leu Ser Lau Ser Cys Val Ala Cys Ser Arg Phe Pro Asn ttc agc atc ctc tac tgg c\g ggc aat ggt tcc ttc att gag cac ctc Phe Ser Ile Leu Tyr Trp Leu Gly Asn Gly Ser Phe Ile Glu His Leu cca ggc cga ctg tgg gag ggg agd acc agc cgg gaa cgt ggg agc aca Pro Gly Arg Leu Trp Glu Gly Ser Thr Ser Arg Glu Arg Gly Ser Thr ggt acg cag ctg tgc aag gcc ttg gtg\ctg gag cag ctg acc cct gcc Gly Thr Gln Leu Cys Lys Ala Leu Val Deu Glu Gln Leu Thr Pro Ala ctg cac agc acc aac ttc tcc tgt gtg ctc atg gac cct gaa cag gtt Leu His Ser Thr Asn Phe Ser Cys Val Leu Val Asp Pro Glu Gln Val gtc cag cgt cac gtc gtc ctg gcc cag ctc tgg gct ggg ctg agg gca Val Gln Arg His Val Val Leu Ala Gln Leu Trp Ala Gly Leu Arg Ala acc ttg ccc ccc acc caa gaa gcc ctg ccc tcc agc cac agc agt cca Thr Leu Pro Pro Thr Gln Glu Ala Leu Pro Ser Ser His Ser Ser Pro

492 cag cag cag ggt Gln Gln Gly <210> 33 <211> 495 <212> DNA <213> Mus musculus <220> <221 mat peptide <222> 1..495 <400> 33 aca tot goa cot cag aca act goo act gto tta act gga ago toa aaa 48 Thr Ser Ala Pro Gln Thr Thr Ala Thr Val Leu Thr Gly Ser Ser Lys 1 15 gac cca tgc tct tcc tgg tct/cca gca gtc cca act aag cag tac cca 96 Asp Pro Cys Ser Ser Trp Ser Rro Ala Val Pro Thr Lys Gln Tyr Pro 20 25 30 gca ctg gat gtg att tgg cca gaa aa gaa gtg cca ctg aat gga act 144 Ala Leu Asp Val Ile Trp Pro Glu L\xs Glu Val Pro Leu Asn Gly Thr 35 45 ctg acc ttg tcc tgt act gcc tgc agc ckc ttc ccc tac ttc agc atc 192 Leu Thr Leu Ser Cys Thr Ala Cys Ser Ard Phe Pro Tyr Phe Ser Ile 50 55 60 ctc tac tgg ctg ggc aat ggt tcc ttc att gag cac ctt cca ggc cgg 240 Leu Tyr Trp Leu Gly Asn Gly Ser Phe Ile Glu Vis Leu Pro Gly Arg 65 70 75 80

ctg aag gag ggc cac aca agt cgc gag cac agg aac aca agc acc tgg

Leu Lys Glu Gly His Thr Ser Arg Glu His Arg Asn Thr Ser Thr Trp

288

		1														
ctg	cac	agg	gcc	ttg	gtg	ctg	gaa	gaa	ctg	agc	ссс	acc	cta	cga	agt	336
Leu	His	Arg	Ala	Leu	Val	Leu	Glu	Glu	Leu	Ser	Pro	Thr	Leu	Arg	Ser	
		\	\100					105					110			
acc	aac	ttc	tcd	tgt	ttg	ttt	gtg	gat	cct	gga	caa	gtg	gcc	cag	tat	384
Thr	Asn	Phe	Ser	\cys	Leu	Phe	Val	Asp	Pro	Gly	G1n	Val	Ala	G1n	Tyr	
		115					120					125				
cac	atc	att	ctg	gcc	\cag	ctc	tgg	gat	ggg	ttg	aag	aca	gct	ccg	tcc	432
His	lle	lle	Leu	Лlа	c/I u	Leu	Trp	Лsр	G 1 y	Leu	Lys	Thr	A1a	Pro	Ser	
	130					135					140					
					'	\										
cct	tct	caa	gaa	acc	ctc	tc t	agc	cac	agc	cca	gta	tcc	aga	tca	gca	480
Pro	Ser	Gln	G1u	Thr	Leu	Set	Ser	His	Ser	Pro	Val	Ser	Arg	Ser	Ala	
145					150	. \	\			155					160	
ggc	cca	ggg	gtt	gca												495
Gly	Pro	G 1 y	Val	Ala			\	\								
				165												
<21	0 > 3	4						/	\		•					
<21	1> 4	11														
<21	2> D!	N A														
<21	3> Ho	omo s	sapie	ens												
									,							
< 40	0 > 3	4														
aca	cct	gtc	tcg	cag	acc	acc	aca	gct	gcc	act	gcc	tca	gtt	aga	agc	48
Thr	Pro	Val	Ser	Gln	Thr	Thr	Thr	Ala	Ala	Thr	∖A1a	Ser	Val	Arg	Ser	
1				5					10					15		
											\					

aca aag gac ccc tgc ccc tcc cag ccc cca gtg ttc\cca gca gct aag
Thr Lys Asp Pro Cys Pro Ser Gln Pro Pro Val Phe Pro Ala Ala Lys
20 25 30

	\															
cag	tgt	cca	gca	ttg	gaa	gtg	acc	tgg	cca	gag	gtg	gaa	gtg	cca	ctg	144
Gln	Ċys	KLO	Ala	Leu	Glu	Val	Thr	Trp	Pro	Glu	Val	Glu	Val	Pro	Leu	
		3\5					40					45				
		·														
			dtg													192
Asn	Gly	Thr	Lew	Ser	Leu	Ser	Cys	Val	Лla	Cys	Ser	Arg	Phe	Pro	Asn	
	50		· ·			55					60					
ttc	agc	atc	ctc	tak	tgg	ctg	ggc	aat	ggt	tcc	ttc	att	gag	cac	ctc	240
			Leu	\									-			
65					\day{0}				·	75					80	
cca	ggc	cga	ctg	tgg	gag	ggg	agc	acc	agc	cgg	gaa	cgt	ggg	agc	aca	288
Pro	Gly	Arg	Leu	Trp	Glu	C/A	Ser	Thr	Ser	Arg	Glu	Arg	G 1y	Ser	Thr	
				85		/	\		90					95		
ggt	acg	cag	ctg	tgc	aag	gcc	t t\g	gtg	ctg	gag	cag	ctg	acc	cct	gcc	336
G 1 y	Thr	Gln	Leu	Cys	Lys	Ala	Leu	\Val	Leu	Glu	Gln	Leu	Thr	Pro	Ņlа	
			100					\ 05					110			
			acc						\							384
Leu	His		Thr	Asn	Phe	Ser		Val	Deu	Val	Asp		Glu	G1n	Val	
		115					120					125				
gtc	cag	cgt	cac	gtc	gtc	ctg	gcc	cag								411
Val	Gln	Arg	His	Val	Val	Leu	Ala	Gln								
	130					135				\	\					
.01		_														
)> 35									·						
	l> 21 2> DN										\	\				
			anni													
\) / HC	JIIO I	sapie	ะแร												
< 400)> 35	5										/	\			
tgtg	gtgad	ctg	gagaa	agagg	ga cg	gttgt	tcaca	a ga	taaag	gagc	cag	gctca	ade a	agcto	ctgac	60
													١.			

Juli

gca	tgca	\	_		_										ct ttg	
		/ W	et T	hr M	et A	rg Hi	is As	sn T	rp T	hr P	ro A	sp L	eu S	er Pi	ro Leu	ì
			1				5					10				
		/														
tgg	gtc	ctg	ctc	ctg	tg t	gcc	cac	gtc	gtc	act	ctc	ctg	gtc	aga	gcc	159
Trp	Val	Leu	Leu	Leu	Cys	Ala	His	Val	Val	Thr	Leu	Leu	Val	Arg	Ala	
15					20					25					30	
			/	\												
aca	cct	gtc	tcg	cag	acc	acc	aca	gct	gcc	act	gcc	tca	gtt	aga	agc	207
Thr	Pro	Val	Ser	G/n	Thr	Thr	Thr	Аlа	A1a	Thr	Ala	Ser	Val	Arg	Ser	
				35					40					45		
				`	\											
aca	aag	gac														216
Thr	Lys	Asp														
					'											
<21	0> 36	3														
<21	1> 23	34														
<213	2> D1	۱A				. \	\									
<213	3> Ho	omo :	sapi	ens												
<40	0> 36	3					. \	\								
ttc	tcc	tgt	gtg	ctc	gtg	gac	cct	gaa	cag	gtt	gtc	cag	cgt	cac	gtc	48
								\						His		
1		•		5		•		\	\ 10					15		
•				Ū					\.					10		
øtc	ctø	gcc	cag	ctc	tσσ	gct	ggg	ctø	agg	д са	acc	ttø	ccc	ссс	acc	96
														Pro		00
, 41	200	1114	20	Бос	11 p	n I u	OI,	25	6	\	1111	БСС	30		* ***	
			50					20					00			
саа	σaa	gcc	cta	ссс	tcc	age	cac	age	ant	cca /	\ \	cad	can	a a t		141
				Pro							\	_	_			1 1 1
VIII	014	35	DCu	110	001	001	40	GCI	001	110	1	45	0111	O 1 y		
		9.0					40				/	\ 43				
+	7004	~								·				4. n - *		. 001
ıad	gat [(ag	.aca	RRRC	ca go	Jagca	agca	. aa	CLT	gacc	aga	R C/L L I	ggg	iccta	acctgt	201
												\				
CTA	ctacctggag tgaacagtcc ctgactgcct gta															234

	\															
<210	0> 3	7														
<21	1> 7	44														
<215	2> D	NA 🖊														
<215	3 > H	omo	sapi	ens												
(220) >		/	\												
<22	1 > ma	at p	epti	dd												
<222	2> 1	60	651													
				\	\											
< 400)> 3'	7														
tgts	gtga	ctg	gaga	agag	ga\c;	gttg	tcac	a ga	taaa	gagc	cag	gctca	acc a	agcte	cctgac	60
					\											
gcaf	tgca	tc a	tg a	cc a	tg a	ga ca	ac a	ac t	gg a	ca c	ca g	ac c	tc a	gc c	ct ttg	111
		M	et T	hr M	et A	rg\H	is A	sn T	rp T	hr P	ro A	sp L	eu S	er P	ro Leu	
		- ;	30				- ;	25				- 5	20			
						'	\									
tgg	gtc	ctg	ctc	ctg	tgt	gcc	dac	gtc	gtc	act	ctc	ctg	gtc	aga	gcc	159
Trp	Val	Leu	Leu	Leu	Cys	Ala	H i/s	Val	Val	Thr	Leu	Leu	Val	Arg	Ala	
	-15					-10	\	\			- 5					
aca	cct	gtc	tcg	cag	acc	acc	aca	gdt	gcc	act	gcc	tca	gtt	aga	agc	207
Thr	Pro	Val	Ser	Gln	Thr	Thr	Thr	Ala	Ala	Thr	Аlа	Ser	Val	Arg	Ser	
1				5					10					15		
																•
aca	aag	gac	ccc	tgc	ccc	tcc	cag	ccc	cca	\g tg	ttc	cca	gca	gct	aag	255
Thr	Lys	Asp	Pro	Cys	Pro	Ser	G1n	Pro	Pro	Nal	Phe	Pro	Ala	Ala	Lys	
			20					25					30			
										`						
cag	tgt	cca	gca	ttg	gaa	gtg	acc	tgg	cca	gag	gtg	gaa	gtg	cca	ctg	303
G1n	Cys	Pro	Ala	Leu	Glu	Val	Thr	Trp	Pro	Glu	Val	G 1 u	Val	Pro	Leu	
		35					40				•	\ 45				
aat	gga	acg	ctg	agc	tta	tcc	tgt	gtg	gcc	tgc	agc	cgk	ttc	ccc	aac	351
Asn	Glv	Thr	ىرم ا	Sar	الم آ	Sar	Cvc	Val	A 1 a	Cvc	Sar	Ara	Phe	Pro	Acn	

ttc agc atc ctc tac tgg ctg ggc aat ggt tcc ttc att gag cac ctc 399 Phe Sex Ile Leu Tyr Trp Leu Gly Asn Gly Ser Phe Ile Glu His Leu 65 70 75 80 cca ggc cga ctg tgg gag ggg agc acc agc cgg gaa cgt ggg agc aca 447 Pro Gly Arg Leu Trp Glu Gly Ser Thr Ser Arg Glu Arg Gly Ser Thr 90 85 95 ggt acg cag ctg tgc aag gcc ttg gtg ctg gag cag ctg acc cct gcc 495 Gly Thr Gln Leu Cy's Lys Ala Leu Val Leu Glu Gln Leu Thr Pro Ala 105 100 110 ctg cac agc acc aac toc tcc tgt gtg ctc gtg gac cct gaa cag gtt 543 Leu His Ser Thr Asn Phe Ser Cys Val Leu Val Asp Pro Glu Gln Val 115 120 125 gtc cag cgt cac gtc gtc ctg/gcc cag ctc tgg gct ggg ctg agg gca 591 Val Gln Arg His Val Val Leu Ala Gln Leu Trp Ala Gly Leu Arg Ala 130 135 140 acc ttg ccc ccc acc caa gaa gcc ctg ccc tcc agc cac agc agt cca 639 Thr Leu Pro Pro Thr Glu Ala Lew Pro Ser Ser His Ser Ser Pro 145 150 155 160 cag cag cag ggt taagactcag cacagggcca acagggcac aaccttgacc 691 Gln Gln Gln Gly agagettggg tectacetgt etacetggag tgaacagted etgaetgeet gta 744 <210> 38 <211> 351 <212> DNA <213> Mus musculus <400> 38

çca act aag cag tac cca gca ctg gat gtg att tgg cca gaa 48 Ala Val Pro Thr Lys Gln Tyr Pro Ala Leu Asp Val Ile Trp Pro Glu 1 10 15 5 aaa gaa gtg cca ctg aat gga act ctg acc ttg tcc tgt act gcc tgc 96 Lys Glu Val Pro Leu Asn Gly Thr Leu Thr Leu Ser Cys Thr Ala Cys 25 20 30 agc cgc ttc ccc tac ttc agc atc ctc tac tgg ctg ggc aat ggt tcc 144 Ser Arg Phe Pro Tyr Phe Ser Ile Leu Tyr Trp Leu Gly Asn Gly Ser 35 45 ttc att gag cac ctt cca ggc cgg ctg aag gag ggc cac aca agt cgc 192 · Phe Ile Glu His Leu Pro Gly Arg Leu Lys Glu Gly His Thr Ser Arg 50 60 gag cac agg aac aca agc acc tgg ctg cac agg gcc ttg gtg ctg gaa 240 Glu His Arg Asn Thr Ser Thr Trp Leu His Arg Ala Leu Val Leu Glu 65 70 75 80 gaa ctg agc ccc acc cta cga agt acc aac ttc tcc tgt ttg ttt gtg 288 Glu Leu Ser Pro Thr Leu Arg Ser Thr Asn Phe Ser Cys Leu Phe Val 85 90 95 gat cct gga caa gtg gcc cag tat cac alc att ctg gcc cag ctc tgg 336 Asp Pro Gly Gln Val Ala Gln Tyr His Ile\ Ile Leu Ala Gln Leu Trp 100 105 110 gat ggg ttg aag aca 351 Asp Gly Leu Lys Thr 115 <210> 39

F

<211> 336 <212> DNA

<213> Mus musculus

< 40	0 / 3	9														
ctg	agck	tta \	gagc	tcca	ag a	agct	attc	g gg	gctt	agga	gcc	agaa	gct	gact	gctgcc	60
tgc	cctt	ccc	agaa	ggag	gc t	ggca	agct	g gc	aaac	ggac	tgt	tgct	tcc	cagaı	ggaagt	120
cac	agac	acc	agac	ttgc	tt g	caag	tcate	c at	g ac	cat	g aga	a ca	c tg	c tg	g aca	174
									_	r Me	t Ar	_	s Cy	s Tr	p Thr	
									1			5				
gca	ggc	ссс	agt	tct	tgg	tgg	gtc	ctg	ctt	ttg	tat	gtc	cat	gtc	att	222
Ala	Gly	Pro	Ser	Ser	Trp	Trp	Va1	Leu	Leu	Leu	Tyr	Val	His	Val	Ile	
	10					15					20					
ttg	gcc	aga	gcc	aca	tct.	gca	cct	cag	aca	act	gcc	act	gtc	tta	act	270
					\								•	Leu		
25					3 0					35					40	
					'											
gga	agc	tca	aaa	gac	cca	t\g c	tct	tcc	tgg	tct	cca	gca	gtc	cca	act	318
Gly	Ser	Ser	Lys	Asp	Pro	Суs	Ser	Ser	Trp	Ser	Pro	Ala	Val	Pro	Thr	
				45		/	\		50					55		
aag	cag	tac	cca	gca	ctg											336
Lys	Gln	Tyr	Pro	Ala	Leu											
			60				/	\								
401	0															
	0> 40 1> 2:															
	1 / Z; 2 > D!							/	\							
			uscu	lus												
		- S 111	_ O O u .													
< 400)> 4()							/							
gat	cct	gga	caa	gtg	gcc	cag	tat	cac	atc	att	ctg	gcc	сая	ctc	† σ σ	4.8

Asp Pro Gly Gln Val Ala Gln Tyr His Ile Ile Leu Ala Gln Leu Trp

10

15

5



gat ggg ttg aag aca gct ccg tcc cct tct caa gaa acc ctc tct agc 96 Asp Gly\Leu Lys Thr Ala Pro Ser Pro Ser Gln Glu Thr Leu Ser Ser 25 30 20 cac agc cca\gta tcc aga tca gca ggc cca ggg gtt gca taaagccaac 145 His Ser Pro Wal Ser Arg Ser Ala Gly Pro Gly Val Ala 35 40 45 cacaccatga cettgaccag ageetggete teatetacet ggagggtgga gtetacacca 205 taggctgtga ttgcctttct gctgctgaac ctcaaactca agcttcac 253 <210> 41 <211> 847 <212> DNA <213> Mus musculus <220> <221> mat peptide <222> 235..729 <400> 41 ctgagcctta gagctccaag aagctattdg gggcttagga gccagaagct gactgctgcc 60 tgcccttccc agaaggaggc tggcaagctg \gcaaacggac tgttgcttcc cagaggaagt 120 cacagacacc agacttgctt gcaagtcatc at acc atg aga cac tgc tgg aca 174 Met\Thr Met Arg His Cys Trp Thr -25 gca ggc ccc agt tct tgg tgg gtc ctg ctt ttg tat gtc cat gtc att 222 Ala Gly Pro Ser Ser Trp Trp Val Leu Leu Leu Tyr Val His Val Ile -20 -15 -10 - 5 ttg gcc aga gcc aca tct gca cct cag aca act gcc act gtc tta act 270 Leu Ala Arg Ala Thr Ser Ala Pro Gln Thr Thr Ala Thr Val Leu Thr

25/26

5 10

		1		1				5					10			
gga	agc	tca	\aaa	gac	cca	tgc	tct	tcc	tgg	tct	cca	gca	gtc	cca	act	318
G 1 y	Ser	Ser	l)ys	Asp	Pro	Cys	Ser	Ser	Trp	Ser	Pro	Ala	Val	Pro	Thr	
		15					20					25				
			\													
aag	cag	tac	cca	gca	ċtg	gat	gtg	att	tgg	cca	gaa	aaa	gaa	gtg	cca	366
Lys	Gln	Tyr	Pro) 1a	Leu	Asp	Val	lle	Trp	Pro	Glu	Lys	Glu	Val	Pro	
	30					35					40					
ctg	aat	gga	act	ctg\	acc	ttg	tcc	tgt	act	gcc	tgc	agc	cgc	ttc	ccc	414
Leu	Asn	Gly	Thr	Leu	Thr	Leu	Ser	Cys	Thr	Ala	Cys	Ser	Arg	Phe	Pro	
45					\ 5 0					55					60	
tac	ttc	agc	atc	ctc	tac	tgg	ctg	ggc	aat	ggt	tcc	ttc	att	gag	cac	462
Tyr	Phe	Ser	Ile	Leu	Tyr	Trp	Leu	G1y	Asn	G 1 y	Ser	Phe	Ile	Glu	His	
				65					70					75		
						\						•				
ctt	cca	ggc	cgg	ctg	aag	gag	ggc	cac	aca	agt	cgc	gag	cac	agg	aac	510
Leu	Pro	G 1y	Arg	Leu	Lys	Glu	G/A	His	Thr	Ser	Arg	G 1 u	His	Arg	Asn	
			80				/	85					90			
aca	agc	acc	tgg	ctg	cac	agg	gcc	t\tg	gtg	ctg	gaa	gaa	ctg	agc	ccc	558
Thr	Ser	Thr	Trp	Leu	His	Arg	Ala	Led	Val	Leu	Glu	Glu	Leu	Ser	Pro	•
		95					100	,				105				
acc	cta	cga	agt	acc	aac	ttc	tcc	tgt	t t\g	ttt	gtg	gat	cct	gga	caa	606
Thr	Leu	Arg	Ser	Thr	Asn	Phe	Ser	Cys	Led	Phe	Val	Asp	Pro	G1y	Gln	
	110					115			,	\	120					
gtg	gcc	cag	tat	cac	atc	att	ctg	gcc	cag	ctc	tgg	gat	ggg	ttg	aag	654
Val	Ala	Gln	Tyr	His	lle	Ile	Leu	Ala	Gln	Leu	Trp	Asp	G 1y	Leu	Lys	
125					130					135	\				140	
											\					
aca	gct	ccg	tcc	cct	tct	caa	gaa	acc	ctc	tct	a\g c	cac	agc	cca	gta	702

Thr Ala Pro Ser Pro Ser Gln Glu Thr Leu Ser Ser His Ser Pro Val

WC COPECTED CECTOR

150

155

July .

tcc aga tca gca ggc cca ggg gtt gca taaagccaac cacaccatga 749
Ser Arg Ser Ala Gly Pro Gly Val Ala
160 165

ccttgaccag agcctggctc tcatctacct ggagggtgga gtctacacca taggctgtga 809

ttgcctttct gctgctgaac ctcaaactca agcttcac